National Council of Public/Partnerships
Federal Technology Partnering

Best Practices
for Federal
Technology
Partnerships

Organized and sponsored

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Federal Technology Partnering Forum
Partnerships, Alliances and Consortia
National Council of Public Private Partnerships
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Facilitated by
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Summary

Federal Technology Partnering Arrangements: Definition and Scope

FINDING: "Partnering" has yet to achieve institutional acceptance.
In the current environment, use of "partnering" requires Federal managers to demonstrate that program goals can only be accomplished through this innovative practice, and usually must be approved on a case-by case basis.

FINDING: "Partnering" cannot easily be distinguished from other "packaging" of public/private sector arrangements.
Previous managerial techniques such as "stakeholders" analysis offer evidence that public sector business arrangements with the private sector can be caught up in contemporary business jargon and lose the distinctiveness necessary for application to the public sector.

FINDING: The use of the term "partnering" has yet to achieve, at the federal level, a consensus of characteristics.
The term "partnership" is being used to capture distinct programs with different mechanisms, policy and procedures. The features of a partnership are not consistent across the federal agencies.

FINDING: Collaborative research has anecdotal evidence that faster results were achieved.
At ARPA, the typical project required fifteen to forty-eight (15-48) years for design, development and deployment. Collaboration has reduced that to a five (5) year cycle.

FINDING: The Federal Government must reach beyond the traditional industry segments to achieve mission mandates.
Large segments of industry that spend considerable resources on research, resist working with the Federal Government due to the "cost" of doing business. The changing missions of Agencies require that they engage a broader array of industry sectors with non-traditional business methods

FINDING: Collaborations between industry and the federal build legitimate constituency for R&T based agencies and is a basis of good will.
Additionally these linkages, if based upon a whole industry in pre-competitive efforts, deflect the corporate welfare and industrial policy criticisms

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I. Decision & Formation Process

FINDING: The planning process establishes and defines the relationship dynamics for the implementation of the Agreement.

FINDING: To execute the planning process, an individual [industry] champion must be identified and cultivated.
For a program with broad implications, a corporate champion (typically a CEO) must be able to harness not only their internal organizational strength, but also be able to likewise encourage other CEOs. He or she must be the standard-bearer to show that the risk is worth the reward. For a narrower program, a champion is required to harness the requisite resources for implementation and deployment.

FINDING: "Substantial involvement" is the best tool to form a partnership.

FINDING: There must be an industrial incentive to engage the private sector.
Examples of incentives include:

- Seed funding for universities
- Intellectual property rights
- Cost-sharing
- Use of government logo (but not as an endorsement).

FINDING: Industry must achieve consensus to actively engage the government.
The federal managers can begin by working with pre-existing industry networks, if that network has sufficient strength. The issue becomes if the industry has no pre-existing network or a network is too diffused to gain credibility. Industries unable or unwilling to form consensus have failed to engage the federal managers.

FINDING: The roles and responsibilities of both the private and public sector shift throughout the life cycle of a long-term collaborative program.
In the traditional model, the government designed and created the specification leading to federal integration. As a large scale, long-term program was undertaken the private sector was given the responsibility to design, build, test, and integrate. Industry was required to team to implement, and the leader of the team changed throughout the life cycle of the program.

In the collaborative model, the government and industry jointly develop a long-term strategy and agree on specific forms of collaboration to implement that strategy. The public sector may initiate the idea or vision of the long effort, but it shifts over time to private sector leadership and initiative.

FINDING: The formation process must be fully open.
The development of business agreement terms and conditions is accomplished only by a coordinated response through open working sessions

FINDNG – The use of pre-solicititation announcements in the formation process ensures "fairness doctrine" and full disclosure objectives are met.

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II. Governance and Organization

FINDING: The government needs to understand the paradigm shift from contractual authority to pro-active facilitator role.
This requires that the government move from a control to facilitator mindset:

Managerial Characteristics	***Contractual Role***	***Facilitator Role***
Management style	Passive Control	Pro-active facilitation
Management authorities and mechanisms	Regulations, Standards	Procedures based upon program needs
Management attitude	Superior	Win-Win

.
FINDING: The Federal government's role must expand beyond that necessary to manage contractual arrangements, requiring new skill sets of federal managers

Industry Responsibilities and Skills	**Office of Industrial Technology Responsibilities and Skills**
Leads the process	Facilitates the process
Prioritizes technology needs	Coordinates industry participation
Develops a technology strategy	Leverages government resources
Commits resources	Shares project costs
Directs R&D through partnerships	Provides access to the national laboratories
Uses results	Disseminates results

The federal government adds value by adding functions. The traditional role of government was to only provide leveraging of government resources, but experience confirms that the government must expand its scope and responsibilities to engage and retain the private sector. This expanded scope requires additional skills and professional training for the staff executing these arrangements.

FINDING: The single-entity model interface with government has been confirmed repeatedly.

FINDING: Organizational structure is dependent upon program structure.

FINDING: Trade Associations are a useful mechanism to offer support services.
Trade associations, however, are risk averse and offer limited opportunity to actually form the partnership. Within the Association are key resources, which can be tapped if they can be identified and cultivated. The associations can be effective in proselytizing the accomplishments and achievements of the project or program.

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III. Financial Arrangements

FINDING: The issue of "financing" is substantially different between the Federal partners versus their private sector counterpart(s).
The Federal partner manager is heavily concerned with financing authorities and regulations that permit ease of financial management. The private sector partner is heavily concerned with securing financing for high-risk projects and which meets the Government's conditions for "matching".

FINDING: Intellectual property, a key asset to the private sector in securing financing.
The private sector must have clear rights to intellectual property, either through ownership or licensing, as a means to assure financing of their portion of a partnership. Government "march-in" rights are not a major issue. DOE has a three-year march-in rights clause, but this has never been executed.

FINDING: FASB treatment of intangibles limits the private sector partner's ability to tap financial markets.
The FASB recognition of intangible asset related expenses a “sunk cost”, removes recognition of these items from the balance sheet and the ability to "lever" off the value of such assets.

FINDING: Termination for convenience remains an element of concern for lenders.
The mere appearance of the "termination for convenience" creates a risk that presents a barrier to financing.

FINDING: Collaborative funding agreements, such as other transactions, are not understood nor accepted by the commercial bankers that provide cash flow financing of private-sector partners.

FINDING: The federal government’s imprimatur, must not act as an endorsement, yet still offers substantial critical support for companies.
This is particularly important for small companies seeking sources of funding. ATP has a list of companies that, with the Federal Government imprimatur acting as a catalyst, were able to find other financing sources. There are case examples wherein the company’s involvement with the federal government and the contract therein, was sufficient to gain financing from financial institutions and the capital markets through an IPO. As an example, the TIFIA Program provided a halo effect fostering reconsideration by private financing markets. As a counter to this, financial institutions rejected a federal contract as security for financing sought to procure an asset.

FINDING: IR&D remains a questionable “cost-shared” contribution by the private sector.
As all IR&D applications are not necessarily approved, there remains an element of risk by the private sector that the cost becomes a “real cost”, and not reimbursed. The federal portion of IR&D may not be included in the “cost-shared” contribution.
FINDING: Private companies with extraordinarily high cost rates must be certified and subject to audits.

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FINDING: The use of private sector accounting practices and principles, such as those proscribed by GAAP. facilitates private sector participation.
Firms with established DCAA practices and procedures typically use these as opposed to commercial practices and procedures, as the company has made the investment and developed the skill sets. Commercial firms without DCAA mechanisms can use an independent auditor, noting that the IG must have access to the books, which may result in procedures similar to DCAA anyway.

FINDING: The use of the government logo has reduced the investment required due to financial markets acceptance.

FINDING: Federal employees do not fully understand the capital system/markets.

FINDING: Create private sector financial working group to guide the federal government or public consortia.

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IV. Legal Authorities & Intellectual Property Policy

FINDING: The use of traditional contractual models restricts innovative thinking, which is contrary to the need for innovation in collaborative research efforts, especially for the agreement formation.
The standardized legal framework of the federal government restricts the freedom envisioned by customized "agreement structure" f often generated by partnering. The essence of contracting is to permit freedom between the parties. Standardization restricts that freedom. OTA model has become standardized to the point the essential thought necessary to formulate a contract may be lost. The reaction of government is to include each and every incident as a "lesson learned" and build that into the agreement. After a period of a long period, so many lessons are incorporated, there is no innovation and no thought.

FINDING: Other Transaction Authority (OTA) provides flexibility not found in traditional implementing mechanisms, such as Co-operative Agreements and Contracts.
The history of OTA utilization indicates that IP rights can be quite flexible, or that they can resort to FAR-type arrangements. The flexibility offered in OTA has attracted private sector entities to engage in more risk-taking, future design programs (such as the Future Combat System).

Legal Vehicle	
Contract	Very structured IP
Cooperative Agreement	Very structured IP
Other Transaction Authority	Very flexible IP

The Big Three Automakers became partners with the Federal Government because of OTA.

FINDING: Standardize the process of legal agreement formation; do not standardize the agreement itself.
The NSF uses a model as a basis, but retains flexibility as a philosophical approach. It has removed a private partner when the company prepared an agreement that was too onerous.

FINDING: The government must establish agency/program goals before focusing on legal structure.
Its program goals and not its legal authorities must drive the government decision-making. This may result in times when it must walk away from a research opportunity. The Agency must remain committed to its goals. The agreement needs to establish principles at a strategic level.

FINDING: Anti-trust remains a serious hurdle.
Half of the collaborative research efforts register with the Department of Justice (DoJ) for anti-trust exemption. Companies, can, however, commingle efforts at a third party institution without registration and impact from anti-trust. The ATP Program requires a company to file with the DoJ. The DoJ is agnostic about joint venture research, which would proceed from research to manufacturing.

FINDING: Industry need for innovation is a key characteristic of collaborative research interest.
The need for continual technology innovation by the information technology sector forced them to consider alternative research resources, thereby increasing the industry's use of '"partnering." As this innovative pressure mounts for other industries, the same drive for collaborative research manifests through public/private research efforts. The general aviation has increasingly experienced this same drive for innovation.

V. Monitoring & Reporting

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FINDING: Federal government must seek a very broad benefit, which can be measured. This is not based upon the private sector's revenue or profits.
Examples of such metrics include energy savings, environmental impact, and productivity.

FINDING: Statistics are not the key metric for valuation of collaborative research.

FINDING: Federal government establishes a monitoring process and incorporates that process in the design phase of the partnering process.

FINDING: Milestones monitoring accelerates projects to commercialize.
The use of milestones, which are mutually agreed upon, can lead to accelerated commercialization. The milestones permit the partners to establish a clear path leading up to commercialization.

FINDING: Metrics must use those methodologies approved by external parties, with experience and credibility in "measurement" of technology transfer impacts.

FINDING: Use of an independent auditor elevates the message derived from metrics.
An independent auditor must be proactive and able to communicate with Congress. Reputation of the auditor is critical.

FINDING: Program results need to be communicated to different audiences.

FINDING: Use of historical metrics is preferred over projections

FINDING: Mathematically modeling anticipated intangible benefits is beginning to gain acceptance by senior federal managers. However, "quality of life metrics" remain extremely difficult to quantify.

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Appendix: Agenda Topic Issues

FEDERAL TECHNOLOGY (R&T) PARTNERING FORUM
JANUARY 31, 2000
8:00 am - 5:00 pm

AGENDA ISSUES

Federal Technology Partnering Arrangements: Definition and Scope — Strategic Alliances and Partnerships have become commonly used words that are applied across a wide range of collaborative arrangements. The term has been applied to everything from licensing arrangements to huge consortia that operate like independent companies. This introductory session will develop a definition of "federal technology partnerships" through examination of the benefits of partnering combined with the reality of managing federal technology programs. The outcome of the session will be a set of features that define the scope of federal technology partnerships. Examples of these partnerships will be provided as context for subsequent discussions.

Financial Arrangements and Cost-Sharing — Resource sharing is a fundamental feature of all partnerships. Federal practice proscribes the business vehicles which will permit them to "share resources" with their technology development partners, and requires specialized reporting from private sector partners. Federal policy also establishes limits on acceptable cost-sharing, excluding items such as background intellectual property that are commonly accepted in private sector technology partnerships. This session will explore the range of financial arrangements and reporting used by the participants. The discussion will consider alternative methods of sharing all forms of resources, including funding, personnel, equipment, and facilities and background intellectual property. Issues such as valuation of in-kind matching resources will be discussed, including exceptions to predominant policy that precludes acceptance of background intellectual property as a qualifying in-kind matching resource.

Monitoring & Reporting — Stakeholders in a partnership require monitoring of progress and feedback to assure their objectives are being met. However, partnership metrics and monitoring systems remain one of the most difficult of all alliance management areas. This session will explore the current Federal policies and practices regarding monitoring of public/private technology alliances. The discussion will range from monitoring concerns expressed from the Congressional down to the program management level. Alternative methods of alliance monitoring will be identified. The session will hopefully identify both best practices as well as analyze failed attempts at monitoring.

Legal Authorities— Federal managers do not have the flexibility of their private sector counterparts to convert alliance structures into operating agreements. All Federal managers, particularly those in technology development & deployment, must operate within a proscribed set of partnering authorities. These authorities, however, are vastly more powerful and flexible than traditional contacting. This session will explore the

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range of authorities used by the different agency participants to structure and implement their partnerships. Discussion will include tradeoffs between use of traditional authorities that are more widely accepted and broader authorities that are more flexible but less accepted by the institutional structure.

Intellectual Property Policy-- The access to Government intellectual property is a key asset that attracts private sector partners. The Federal intellectual property policy for technology partnerships differs from policy for Government contractors, but sometimes in still insufficient to motivate qualified partners. Procedures for issuing intellectual property rights must balance the need to reward partners while still providing a level of public notice. This session will explore issues of IP policy, FOIA exemptions and other issues that affect the motivation of both public and private sector partners.

Decision & Formation Process — The formation of a public/private technology partnership requires a combination of decisions and formation steps that go beyond those necessary for traditional private/private partnerships. This session will explore the management decisions necessary to choose a partnership structure as the method of implementing a given Federal technology program. The decision process often occurs simultaneously in dialogue with potential partnership and stakeholder organizations. These dialogues lay the foundation for different formation processes, which range from public solicitation to targeted discussions with industry association groups.

Governance and Organization — Every partnership requires some form of strategic decision-making and an ongoing management organizational structure. This session will explore the range of governance and organizational structures experienced by the participants, in particular between large vs. small scale partnerships. The Federal Government is normally precluded from direct governance of third party organizations or groups, so the session will explore the range of alternatives applied by the participants. The objective will be to develop an understanding of the fundamental components of governance and management that Federal managers can directly affect or indirectly influence.

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